The inpatient colonoscopy: A worthwhile endeavour

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In the November 2008 issue of The Canadian Journal of Gastroenterology, the difficulties and limitations associated with the performance of colonoscopy in hospitalized patients were discussed. In contrast, the present article will discuss the rationale behind the use of inpatient colonoscopy and present the evidence that supports this practice.

The most evident advantage to the performance of inpatient colonoscopy is clearly its ability to expedite the assessment of patients who would otherwise wait weeks or months to have the procedure performed as an outpatient. The Canadian Association of Gastroenterology has published target wait times (1) that have been deemed acceptable for patients waiting to be assessed by a gastroenterologist, ranging from two weeks for those with suspected malignancy and inflammatory bowel disease, to two months for those with iron deficiency anemia and positive fecal occult blood tests (1,2). Recent studies suggest that total wait times exceed the consensus targets, with 51% to 88% of patients not being seen within the target wait time. Given the large backlog of patients waiting to be assessed by most gastroenterologists, it is not surprising that the wait time for outpatient endoscopy often exceeds six to 12 months. As a result, colonoscopy performed while hospitalized can greatly expedite the management of patients with gastrointestinal issues.

Another benefit of inpatient colonoscopy is the ability to perform the procedure in patients who may not otherwise reliably make themselves available for outpatient procedures, often due to socioeconomic or other situational factors. Additionally, it facilitates the preprocedural care of those patients who require such interventions as prophylaxis against bacterial endocarditis and titration of systemic anticoagulation. These patients can often be more difficult to coordinate before outpatient colonoscopy.

INDICATIONS
The diagnostic yield of colonoscopy is greatly diminished when it is performed for inappropriate indications (3-5). The largest body of evidence supporting the performance of inpatient colonoscopy comes from studies evaluating patients with lower gastrointestinal bleeding (6-11). Some studies have suggested that urgent inpatient colonoscopy in the setting of acute lower gastrointestinal bleeding may lead to higher rates of bleeding source localization, reduced rates of emergency colorectal surgery and shorter lengths of stay in hospital. The evidence, however, is somewhat controversial and at the St Paul’s Hospital, Vancouver, British Columbia, not all patients (particularly those with minor lower gastrointestinal bleeding) undergo urgent inpatient colonoscopy. Those with severe lower gastrointestinal bleeding will undergo urgent endoscopic assessment.

Perhaps even more controversy exists regarding the role of inpatient colonoscopy in the evaluation of chronic diarrhea, iron deficiency anemia and positive fecal occult blood tests. To our knowledge, there is little, if any, compelling evidence to support the use of inpatient colonoscopy in their evaluation. Most patients who present with such indications likely could be appropriately dealt with as outpatients. Despite this, there are certain instances in which inpatient assessment is both practical and beneficial. Such situations include patients who live in remote underserviced communities, who are admitted to hospital elsewhere. In this situation, an inpatient colonoscopy could greatly expedite definitive care for those who ultimately require colorectal surgery or other specialized intervention that would not be available to them in their home communities. Given the vast geographic area of Canada and the relative scarcity of trained endoscopists, this is not an uncommon situation.

PREPARATION
The quality of a patient’s bowel preparation has a crucial impact on the diagnostic yield of colonoscopy and the need for repeat procedures (12). This is especially true for small lesions and flat lesions, which are often difficult to detect even under ideal circumstances. Several studies have determined that inpatient status is an independent predictor of poor bowel preparation (13-15). Other factors, such as a reported failure to follow preparation instructions, a procedural indication of constipation, male sex and a history of cirrhosis, stroke or dementia have also been found to independently predict inadequate colon preparation. All of this leads to reduced enthusiasm among endoscopists toward performance of inpatient colonoscopy. Interestingly, a patient’s perception about the quality of their bowel preparation is often inaccurate (16). Perhaps the issue of poor inpatient preparation can be partially overcome by
more carefully selecting patients in whom preparation is more likely to be adequate and by the use of more rigorous bowel preparation (ie, two-day preparations). It may also be useful for the nursing staff, who will be administering the bowel preparation, and the patient that will be taking it, to be educated regarding the importance of taking it as prescribed.

Generally speaking, most of the available bowel preparations have been determined to have similar efficacy (17,18). Variability has been found in the tolerability of preparations, making some more likely to be taken as instructed by patients. Some studies (19), for instance, suggest that sodium phosphate preparations are better tolerated than polyethylene glycol. Certain patient factors, such as renal or cardiac dysfunction, should prompt the preferential use of polyethylene glycol for safety reasons. Essentially, whatever preparation chosen by the endoscopist is most effective when taken as directed. This is most likely to occur when patients in hospital understand the reason for the procedure and the preparation. With appropriate education and monitoring of their use, we believe that in-hospital preparations can be improved.

**POPULATION**

It is true that those patients in hospital being considered for inpatient colonoscopy very often have numerous other medical issues. This can complicate not only the actual performance of the procedure, but also the ability to achieve adequate bowel preparation. Studies have shown that patients with diabetes, chronic renal disease, chronic obstructive pulmonary disease and chronic constipation require more aggressive bowel preparations before colonoscopy to avoid the need for repeated procedures (20). The use of narcotics and laxatives, both of which are commonly required by inpatients, have also been found to predict those patients who require more intensive bowel cleansing regimens to optimize preparation before colonoscopy. This magnifies the importance of selecting patients with appropriate indications who are engaged in their own care. In these patients, inpatient colonoscopy can be performed safely and can provide information that may be used to competently direct their management. Even in patients older than 80 years of age, many of whom have multiple comorbid diseases, colonoscopy has been found to have a high diagnostic yield and a complication rate as low as that for younger patients (21).

**REFERENCES**

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